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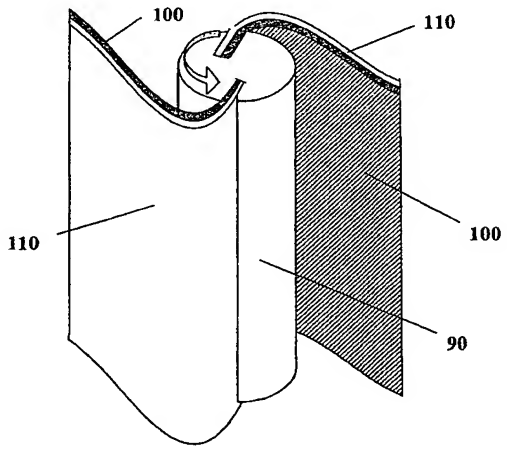
(54) Title: BALANCE WHEEL, BALANCE SPRING AND OTHER COMPONENTS AND ASSEMBLIES FOR A MECHANICAL OSCILLATOR SYSTEM AND METHODS OF MANUFACTURE



(57) Abstract: The application discloses a method of making a balance spring (100) from continuous fibres or ceramic by winding them around a cylindrical former (90), interspaced with a releasing agent (110). Also disclosed is a method of making a balance spring, preferably of a ceramic material (60), by applying it to a rotating former (70) mandrel or plate and subsequently heat treating. Balance wheels (30) having a moment of inertia which decreases with a rise in temperature due to a special arrangement of components (8, 9, 10) having different coefficients of thermal expansion are also disclosed. A mechanical oscillator system comprising a non-magnetic ceramic or continuous fibre balance spring (50) and a non-magnetic balance wheel (30) formed of a material having a coefficient of thermal expansion of less than $6x10^{-6}K^{-1}$ and having a plurality of non-magnetic poising or timing appendages (5) is also disclosed.

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